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Applicant: KUNIN ET AL.
Docket: 13062.1USU1
Title: METHOD AND APPARATUS FOR INTERNET TV

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- ☒ Transmittal sheet, in duplicate, containing Certificate under 37 CFR 1.10.
- ☒ Utility Patent Application: Spec. 18 pgs; 17 claims; Abstract 1 pgs.:
- ☒ 4 sheets of informal drawings
- ☒ Verified statement to establish small entity status
- ☒ A partially signed Combined Declaration and Power of Attorney
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23552

PATENT TRADEMARK OFFICE

SMALL BUSINESS

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
(37 C.F.R. 1.9(f) AND 1.27(c)) - SMALL BUSINESS CONCERN

I hereby declare that I am

- a) ☐ the owner of the small business concern identified below:
b) ☒ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF CONCERN: eCable LLC
ADDRESS OF CONCERN: 7550 France Avenue South
Edina, MN 55435

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 C.F.R. 121.801-805, and reproduced in 37 C.F.R. 1.9(d), for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled METHOD AND APPARATUS FOR INTERNET TV by inventor(s) David Kunin, Sergey Tolkachev, Robert Freidson and Boaz Vinogradov described in

- a) ☒ the specification filed herewith, and having Attorney Docket No. 13062.1USU1.
b) ☐ provisional application serial no. ___, filed ___.
c) ☐ non-provisional application serial no. ___, filed ___.
d) ☐ patent no. ___, issued ___.

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as an independent inventor under 37 C.F.R. 1.9(c) or by any concern which would not qualify as a small business concern under 37 C.F.R. 1.9(d) or a nonprofit organization under 37 C.F.R. 1.9(e). *NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 C.F.R. 1.27)

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I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 C.F.R. 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereof, or any patent to which this verified statement is directed.

NAME: David Kunin
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X SIGNATURE: [Signature] X Date: OCTOBER 9, 2000

METHOD AND APPARATUS FOR INTERNET TV

RELATED APPLICATION

This application claims the benefit of Provisional Application, U.S. Serial No.
5 60/167,505, filed on November 24, 1999, entitled "METHOD AND APPARATUS
FOR INTERNET TV", by David Kunin, Sergey Tolkachev, Robert Freidson, and Boaz
Vinogradov.

BACKGROUND OF THE INVENTION

1. Field of the Invention

10 The present invention relates to a remote-controlled television Internet system
and method, and more particularly, to a telephone interface and voice recognition driven
Internet browser system and method for Internet accessing and browsing on a cable or
satellite television.

15 2. Description of Related Art

In entering into the twenty-first century, Internet business or e-commerce has
become one of the largest industries and continues its growth exponentially. Many
people's daily lives are closely related to the Internet business and are significantly
impacted by the Internet technology's evolution and revolution. More and more people
20 have used the Internet and even accessed/browsed the Internet in their daily lives,

whether for work, entertainment, shopping, or education, etc. The Internet is creating a new economy which is competing with people's traditional way of living.

Like many other new technology, Internet technology is facing many challenges and problems, particularly when Internet technology is penetrating into the general public. One of the main problems is that Internet accessing/browsing often requires one to know how to use a personal computer. At present, still the majority of the general public is not computer literate or may not care to be computer literate. Many people have found that a personal computer is clumsy, expensive to maintain and/or upgrade, and often not reliable. As a result, many people still avoid using a personal computer.

Further, even if one uses a personal computer, to access/browse the Internet is often problematic. For example, the Internet connection between a computer and Internet providers is often denied during a peak time, and the Internet connection is generally very slow in uploading/downloading Internet information. People have to pay much more monthly fees to obtain a relatively higher speed access to the Internet. Such fees put the access to the Internet out of reach of most people.

In addition, a personal computer is usually used for a lot of different applications, such as word processing, imaging designing, networking, email, Internet accessing/browsing web sites, etc. These applications and the computer itself are co-existed and generally operated by a complicated software operating system, thereby significantly slowing down the operations of the applications. The more applications are operated by an operating system, the slower the operation speed is. This significantly slows down the performance of the Internet accessing/browsing. The

operation overhead of most personal computers is not optimized for advanced Internet performance like streaming video or other high volume data transmission applications.

Also, a personal computer does not provide a comfortable setting for people to surf the Internet for entertainment, shopping, education, etc. As a result, many people, even if they own a personal computer, have been looking for other alternatives to access the Internet.

Some recent Internet technology has demonstrated its ability to access/browse the Internet without a personal computer by using new types of devices broadly called “information appliance” -- essentially, they are digital gadgets of various sizes and shapes, which are dedicated to surfing the Internet. Some devices resemble cable TV boxes, and some others look like small laptops, mobile phones, etc. Some devices are used to surf the Internet and access e-mails, and some others are strictly used to surf the Internet. While people have saved money from buying a personal computer, they are forced to purchase as well as maintain a new line of “information appliance” for different purposes. Furthermore, these new devices are basically small sized computers for different specific purposes. However, many people still are not interested in buying a new device just to surf the Internet.

The general public is used to conventional devices, such as televisions, phones, etc. Also, the majority of the general public has already owned these conventional devices. They are easy to operate and relatively reliable in performance. Therefore, there is a desire for the general public to access/browse the Internet via these conventional devices without using a personal computer, or other hardware equipment, such as modem, “information appliance”, etc. Just like many people have quit buying

an answering machine for storing phone messages --instead, using a “hardware-less” voice messaging service--, there is a need to have a “hardware-less” Internet service to access/browse the Internet via conventional televisions and phones.

Most of the homes or offices have recently been wired for cable broadcast,
5 which may hook to a set top box and a cable ready television, or wired for a satellite receiver to receive multiple television channels. It is desirable to use the existing cable wiring or satellite receiver to receive Internet information.

Internet TVs were proposed several years ago. Internet TVs were proposed to provide people the possibility of obtaining Internet access at a location, such as at home,
10 by using only a regular cable TV set and an easy-to-use control device, such as a phone. For example, a concept of a telephone remote-controlled cable television Internet was once introduced, in which button keys of a push button-type telephone at a cable television subscriber’s end are used to simulate functions of a computer mouse or a computer keyboard to remote-control, via a telephone network, an Internet main unit at
15 a cable television provider’s end, so as to acquire Internet resources around the world.

However, the proposed Internet TVs are very primitive and immature. Due to the communication channel band limitation, the proposed Internet TVs cannot serve a large amount of users at the same time. In addition, the push button-type telephone interface is not user-friendly. People are not used to relate the button keys or their
20 corresponding English letters on a telephone to the represented functions or modes. Also, different telephones may have a different arrangement for the button keys. These make surfing the Internet very time consuming and uncomfortable. Further, the button keys on a telephone may malfunction after a period of use. Furthermore, quite a few

people are still using conventional rotary telephones which do not have push button keys.

The Internet TVs were proposed to allow a user to surf the Internet on TV.

However, the proposed Internet TVs mainly provide a bridge between the Internet URL

5 sources and the cable TV systems by stream-downloading whatever the URL sources present. Users may not very easily browse Internet contents to find what they are looking for because the stream-downloaded Internet contents are merely related to certain URL sources or destinations. Many users have wasted a lot of time in looking for URL sources and/or in browsing Internet contents. Users often desire assistance in
10 an interactive manner to not only find a URL source for certain Internet contents, but also have a user-friendly interface to find the URL source and go through the Internet contents. Also, the users would often like to organize Internet contents in a specific fashion.

It is with respect to these or other considerations that the present invention has
15 been made.

SUMMARY OF THE INVENTION

To overcome the limitations in the prior art described above, and to overcome other limitations that will become apparent upon reading and understanding the present specification, the present invention discloses a telephone controlled cable or satellite television Internet system and method.

The present invention solves the above-described problems by using a telephone interface and voice recognition driven Internet browser system and method for Internet accessing/browsing on a cable or satellite television. One of the cable or satellite channels is designated for the Internet accessing/browsing.

10 In one embodiment of the present invention, a system for accessing/browsing the Internet on a cable or satellite television, includes: a phone for receiving a voice signal from a user, the voice signal controlling an Internet interface which displays Internet content on the television via a cable or satellite channel; a voice recognizer, operated on a supercomputer or other computer platforms (e.g. CPU platforms), recognizing/
15 interpreting/analyzing the voice signal and generating command signals to access/browse the Internet, the voice recognizer being capable of simultaneously recognizing voice signals transmitted from a plurality of users and generating command signals for accessing/browsing the Internet; and a stack of computers (or like devices optimized for Internet accessing/browsing) and an Internet browser, each of the stack of
20 computers, based on the command signals from the voice recognizer, accessing/

browsing the Internet and retrieving/organizing Internet content via the Internet browser, the Internet content being sent to the cable or satellite television via cable or satellite media.

Further in one embodiment of the present invention, the voice recognizer
5 operated on the supercomputer or other computer platforms is disposed in a phone switching network. In another embodiment, the voice recognizer operated on the supercomputer or other computer platforms is disposed in a cable or satellite system.

Still in one embodiment of the present invention, the accessed, browsed, or organized Internet content is presented on the cable or satellite television and interactive
10 with the user's voice signal.

Additional in one embodiment of the present invention, the cable or satellite television further includes a set top box/filter having an identification. If an identification of the phone does not match with the identification of the set top box/filter, the Internet content is filtered out. If the identification of the phone matches
15 with the identification of the set top box/filter, the Internet content is presented on the television.

Yet in one embodiment of the present invention, the cable or satellite television further includes a frame grabber device for locally refreshing the content of the Internet information presented on the television until a subsequent request being made by a user
20 via the phone.

Yet in one embodiment of the present invention, the voice signal may include a plurality of instructions of accessing/browsing the Internet content, and/or a plurality of menu instructions, such as "go back" to the previous frame, "go to" the main page, etc.

Still in one embodiment of the present invention, the phone switching network is coupled to a plurality of users' phones for routing corresponding plurality of voice signals from the plurality of users to the voice recognizer for recognizing/interpreting/analyzing the corresponding voice signals and generating command signals to access/browse the Internet on the cable or satellite system. The system includes at least one Internet browser. The Internet browser can be run on a computer or a stack of computers, for accessing, browsing, and/or organizing Internet contents based on the command signals from the voice recognizer and presenting accessed, browsed, and/or organized Internet contents or user instructions from the cable or satellite system to the cable or satellite television.

In one embodiment of the present invention, a method of accessing/browsing the Internet via a cable or satellite television includes: receiving a voice signal from a user, the voice signal controlling an Internet interface which displays the Internet content on the cable or satellite television via a cable or satellite channel; routing the voice signal to a voice recognizer; recognizing/interpreting/analyzing the voice signal and generating command signals to access/browse the Internet contents on a cable or satellite system by a supercomputer, the voice recognizer being capable of simultaneously recognizing/interpreting/analyzing a plurality of voice signals transmitted from a plurality of users and generating the command signals for accessing/browsing the Internet; accessing, browsing, and/or organizing Internet contents based on the command signals from the voice recognizer; and presenting accessed, browsed, and/or organized Internet content from the cable or satellite system to the cable or satellite television via a cable or satellite channel.

Additionally in one embodiment, the method further includes the step of receiving a second voice signal which is interactive to the Internet content presented on the cable or satellite television.

Further in one embodiment of the present invention, the operation of the voice
5 recognizer on the supercomputer is in the phone switching network. In an alternative embodiment, the operation of the voice recognizer on the supercomputer is in the cable or satellite system.

Still in one embodiment of the present invention, the method further includes the step of filtering out the signals received from the cable or satellite channel if an
10 identification of the phone does not match with an identification of a filter, and passing through the signals if the identification of the phone matches with the identification of the filter.

Yet in one embodiment of the present invention, the method further includes the step of locally refreshing the content of the Internet information presented on the
15 television until a subsequent request being made by a user via the phone.

The present invention provides a system capable of uploading voice signals via a narrow band wire, such as a phone line or a data port line (or referred to as the smaller wire), and downloading the Internet information via a broad band wire, such as cables or satellite receiver (or referred to as the larger wire). The larger wire is well suited to
20 receive a large amount of data efficiently. Accordingly, the present invention uses voice recognition to upload a request via a telephone wire and download the requested data via a cable or satellite channel.

One advantage of the present invention is that it provides a user friendly

interface such that a user does not have to be a computer literate to access/browse the Internet. Also, a computer does not have to be maintained and/or upgraded on an individual user basis.

These and various other advantages and features of novelty which characterize the invention are pointed out with particularity in the claims annexed hereto and form a part hereof. However, for a better understanding of the invention, its advantages, and the objects obtained by its use, reference should be made to the drawings which form a further part hereof, and to accompanying descriptive matter, in which there are illustrated and described specific examples of an apparatus in accordance with the invention.

10

BRIEF DESCRIPTION OF THE DRAWINGS

Referring now to the drawings in which like reference numbers represent corresponding parts throughout:

Fig. 1 illustrates a schematic diagram of one embodiment of a system for
5 accessing/browsing the Internet via a cable television in accordance with the principles of the present invention.

Fig. 2 illustrates a block diagram of one embodiment of a telephone interface and a voice recognition driven Internet browser system for Internet accessing/browsing on a cable television in accordance with the principles of the present invention.

10 Fig. 3 illustrates a block diagram of one embodiment of the telephone interface and voice recognition driven Internet browser system implemented for a plurality of users to access/browse the Internet on their respective cable televisions in accordance with the principles of the present invention.

Fig. 4 illustrates one implementation of an operational flow of a method of a
15 telephone interface and voice recognition driven accessing/browsing Internet contents on a cable television in accordance with the principles of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

In the following description of the exemplary embodiment, reference is made to the accompanying drawings which form a part hereof, and in which it is shown by way of illustration the specific embodiment in which the invention may be practiced. It is to
5 be understood that other embodiments may be utilized as structural changes may be made without departing from the scope of the present invention.

The present invention discloses a telephone controlled television Internet system and method. The present invention uses a telephone interface and voice recognition driven Internet browser system and method for Internet accessing/browsing on a cable
10 or satellite television.

As an example, a system and method of accessing/browsing the Internet via a cable environment and a cable ready television are discussed below. It is appreciated that the system and method of accessing/browsing the Internet via a satellite television or any other broad band receivers can be implemented within the scope of the present
15 invention.

In Fig. 1, a telephone controlled cable television Internet system 100 is illustrated. A user's request for accessing/browsing the Internet or other menu instructions are keyed-in via a phone 102 with a unique caller identification (ID). Such request and caller ID are routed to a phone switching network 104 or referred to as a
20 phone hub, such as a Public Switched Telephone Network (PSTN) or a Private Switched Telephone Network, etc. The request and caller ID are processed and sent to a cable TV network 106 or referred to as a cable hub system. The cable TV network 106

includes a stack of computers or CPUs as shown in Figs. 2-3, each of which can be used to access/browse the Internet via an Internet browser. The stack of computers or CPUs can be arranged and configured to receive and process a number of command signals corresponding to users' requests. It is appreciated to a person skilled in the art that the capability of a computer would allow the stack of computers to process essentially a virtual amount of requests in real time. Computers can be upgraded or replaced at the cable TV network 106 end as opposed to at a user end. Accordingly, one of the advantages of the present invention is that a user does not have to be computer literate and/or maintain/upgrade a computer on an individual user basis.

10 The stack of computers access/browse the Internet 107 based on the respective command signals, and retrieve/organize the Internet contents and/or telephone interface command menu based on the Internet browser. The signals carrying the web contents and ID are then sent to cable subscribers to be viewed on a cable TV 108 via cable media 124. The cable TV 108 is coupled to a cable box 110 which includes a filter 131
15 (in Fig. 2). The filter filters out the Internet contents if the ID of the phone does not match with an identification of the filter (in Fig. 2). Thus, only the requester's television displays the requested contents and/or telephone interface command menu.

 The cable box 110 also includes a frame grabber 132 which locally refreshes the Internet contents and/or telephone interface command menu until a subsequent request
20 is made. The Internet contents and/or telephone interface command menu are presented on the cable TV to be viewed by the user.

 Since the speed of making the subsequent request is much slower than the speed of cable TV transmission, the real time use of an Internet designated cable channel is

significantly reduced. Accordingly, a virtual number of users can subscribe to such Internet designated cable channel without losing privacy of Internet contents that each of the user's is viewing. It will be appreciated that the Internet browser is customized and is interactive between the requester and the contents displayed.

5 The phone 102 is preferably coupled to a voice recognizer 114 (in Fig. 2) such that the requester may simply make a request by talking to the phone 102 without the necessity of entering keys or buttons on the phone. It is appreciated that the phone can be in a variety of forms, for example, a touch tone phone, a rotary phone, a cellular phone, a mobile phone, a speaker phone, a Personal Digital Assistant (PDA) phone, etc.

10 In Fig. 2, a telephone interface and voice recognition driven Internet browser system 112 for Internet accessing/browsing on the cable TV 108 is illustrated. The phone 102 receives voice signals from a user or requester. The voice signals control a display content, for example, the Internet contents and/or other telephone interface command/instruction menus, on the cable TV 108 via cable media or channels. The
15 phone switching network or phone hub 104 is coupled to the phone 102 via a switch unit 105 for routing the voice signals to the voice recognizer 114. The voice recognizer 114 recognizes/interprets/analyzes the voice signals and generates command signals to access/browse the Internet. The voice recognizer 114 may be operated on a phone hub computer 116, for example, a supercomputer, such that the voice recognizer 114 is
20 capable of simultaneously recognizing a plurality of voice signals transmitted from a plurality of users or requesters and generating command signals to access/browse the Internet. The supercomputer may be defined as a computer having a calculating speed of at least 1 billion times per second. The phone hub computer 116 can be implemented

in many other computer platforms, e.g. CPU platforms, etc. It is appreciated that any other fast computer, such as parallel-processing computers, may be used within the scope of the present invention. Also, it is appreciated that the present invention does not limit to operating the voice recognizer 114 on a computer. The voice recognizer
5 114 may be operated on a voice card with DSP (Digital Signal Processing) and AgT with a memory, etc.

The command signals are then sent to the cable system 106. It is appreciated that the computer 116 which operates the voice recognizer 114 may also be implemented in the cable system 106 within the scope of the present invention.

10 In Fig. 2, the cable system 106 includes a cable hub computer or CPU 118 to access/browse the Internet 107. An Internet browser 120 is run on the cable hub computer or CPU 118 to retrieve/organize Internet contents from the Internet 107. The cable system 106 also includes a stack of computers or CPUs 122, each of which is operable with the cable hub computer or CPU 118 to access, browse, and/or organize
15 the Internet contents and/or telephone interface command menu. It is appreciated that the Internet browser 120 may be run on the stack of computers or CPUs 122 directly to access, browse, and/or organize the Internet contents and/or telephone interface command menu to be subsequently presented on the respective cable TV 108. It is also appreciated that the voice recognizer 114 can reside on the CPU stacks 122 or on a
20 remote network computer, and the command signals corresponding to the user's voice signals can be sent to the CPU stacks 122 from the remote network computer.

In Fig. 2, the cable system 106 may also include a data storage unit 126 for storing data or information, such as previously retrieved/organized Internet contents,

telephone interface menu, etc. Accordingly, if the user only makes a request with a minor change to the previous Internet contents and/or telephone interface menu, the data or information stored in the data storage unit 106 may be used without the necessity of re-retrieving/re-organizing the Internet contents, thereby increasing the speed for processing the request.

In Fig. 2, the cable system 106 includes an Internet Service Provider (ISP) 28 or referred to as Cable/Internet Service Provider. The ISP 128 routes the cable signals to the cable box 110 of cable user/subscriber 130 via cable media or channel 124. The cable signals are received by the intended user 130, via a filter 131. The filter 131 preferably has a predetermined identification. If the predetermined identification of the filter 131 matches with the phone ID carried with the cable signals, the filter 131 allows the cable signals to be presented on the respective TV 108. If the phone ID does not match with the ID of the filter 131, the filter 131 filters out the cable signals downloaded from the channel 124. Accordingly, the other cable TV subscribers will not be able to view the requester/subscriber's Internet contents and/or telephone interface menu on their TVs 108. Thus, each user can have essentially his/her own Internet TV channel without losing privacy in viewing his/her individually requested Internet contents.

Further, the cable box 110 includes the frame grabber 132. The frame grabber 132 is used to locally refresh the Internet contents and/or telephone interface menu displayed on the user television until a subsequent request is made to change the Internet contents. Since the changes from one Internet content frame to the next Internet content frame are generally small and made in slow speed, e.g. one's speaking speed, the

system can be adapted to be used by a virtual number of users, as opposed to a limited number of users in a typical video-on-demand circuit system. It is also noted that the ISP may be a part of a cable operator (not shown) without departing from the present invention.

5 Fig. 3 illustrates the telephone interface and voice recognition driven Internet browser system 112 implemented for a plurality of users/subscribers 130 to access/browse the Internet on their respective TVs 108 in accordance with the principles of the present invention. It is appreciated that the system may include an intelligent router to send a subscriber requested Internet contents directly to that subscriber without
10 broadcasting the requested Internet contents to all of the other subscribers before filtering out.

 Fig. 4 illustrates one implementation of an operational flow 134 of a method of telephone interface and voice recognition driven accessing/browsing Internet contents on a cable TV in accordance with the principles of the present invention. The
15 operational flow 134 starts with user requesting via a phone in an operation 135. The voice signals of the user are received and are used to control the display on the user's cable TV in an operation 136. Then, the voice signals are recognized/interpreted/analyzed at the voice recognizer which may be run on a supercomputer in an operation 138. The voice recognizer generates command signals corresponding to the voice
20 signals to access/browse the Internet. Next, the Internet contents are accessed, browsed, and/or organized based on the command signals from the voice recognizer in an operation 140. Then, the data or information, such as the Internet contents and/or telephone interface menu, are processed and presented on the user's cable TV via cable

media/cable box in an operation 142. The user may make a further request to interact with the data or information presented on the cable TV in the operation 135. It is appreciated that the operational flow 134 may terminate, pause, or continue at any time by the user. It is also appreciated that the operational flow 134 may include a timing
5 function to ensure that the operational flow 134 will be terminated if the user does not pause or continue the operation 135 within a predetermined period of time.

It is appreciated that the telephone interface command menu can be in a variety of forms. The interface may include commands such as edit, exit, show previous, show next, etc.

10 The foregoing description of the exemplary embodiment of the invention has been presented for the purposes of illustration and description. It is not intended to be exhaustive or to limit the invention to the precise form disclosed. Many modifications and variations are possible in light of the above teaching. It is intended that the scope of the invention be limited not with this detailed description, but rather by the claims
15 appended hereto.

WHAT IS CLAIMED IS:

- 1 1. A system for accessing/browsing the Internet on a television, comprising:
2 a phone for receiving a voice signal from a user, the voice signal controlling a
3 television display which is capable of displaying Internet contents via a television
4 channel;
5 a voice recognizer for recognizing/interpreting/analyzing the voice signal and
6 generating a command signal, the voice recognizer being capable of recognizing/
7 interpreting/analyzing voice signals transmitted from a plurality of users;
8 an Internet browser for accessing/browsing the Internet and
9 retrieving/organizing requested Internet contents; and
10 a stack of computers, each of the stack of computers operable to access/browse
11 the Internet and retrieve/organize requested Internet contents based on the command
12 signal and the requested Internet contents being sent from at least one of the stack of
13 computers to the television via the television channel.
- 1 2. The system of claim 1, wherein the television channel is a cable television
2 channel.
- 1 3. The system of claim 1, wherein the television channel is a satellite television
2 channel.

1 4. The system of claim 1, further comprising a filter having an identification,
2 wherein the phone has an identification, if the identification of the phone does not
3 match with the identification of the filter, the filter filters out the requested Internet
4 contents, and if the identification of the phone matches with the identification of the
5 filter, the filter lets the requested Internet contents pass through such that the requested
6 Internet contents are displayed on the television.

1 5. The system of claim 1, further comprising a frame grabber, the frame grabber
2 locally refreshes the Internet contents on the television until a subsequent user request
3 being made.

1 6. The system of claim 1, further comprising a frame grabber, the frame grabber
2 locally refreshes the Internet contents on the television for a period of time.

1 7. The system of claim 1, wherein the voice recognizer is operated by a
2 supercomputer coupled to a phone switching network.

1 8. The system of claim 1, wherein the stack of computers and the Internet browser
2 are disposed in a cable system.

1 9. The system of claim 7, wherein the phone switching network is coupled to a
2 plurality of phones for routing corresponding voice signals from the plurality of users to
3 the voice recognizer for recognizing/interpreting/analyzing the corresponding voice
4 signal and generating command signals to access/browse the Internet.

1 10. A method of accessing/browsing the Internet on a television, comprising:
2 receiving a voice signal from a user, the voice signal controlling a television
3 display which is capable of displaying requested Internet contents via a television
4 channel;
5 routing the voice signal to a voice recognizer;
6 recognizing/interpreting/analyzing the voice signal and generating command
7 signals, the voice recognizer being capable of recognizing/interpreting/analyzing voice
8 signals transmitted from a plurality of users;
9 accessing/browsing the requested Internet contents; and
10 presenting accessed/browsed Internet contents on the television via the
11 television channel.

1 11. The method of claim 10, wherein the television channel is a cable television
2 channel.

1 12. The method of claim 10, wherein the television channel is a satellite television
2 channel.

1 13. The method of claim 10, further comprising filtering out the requested Internet
2 contents by a filter if an identification of the phone does not match with an
3 identification of the filter, the filter letting the requested Internet contents pass through
4 if the identification of the phone matches with the identification of the filter.

1 14. The method of claim 10, further comprising locally refreshing the Internet
2 contents on the television until a subsequent user request being made.

1 15. The method of claim 10, further comprising locally refreshing the Internet
2 contents on the television for a period of time.

1 16. A computer program storage medium readable by a computing system and
2 encoding a computer program of instructions for executing a computer process for
3 accessing/browsing the Internet on a television, the computer process comprising:
4 receiving a voice signal from a user, the voice signal controlling a television
5 display which is capable of displaying requested Internet contents via a television
6 channel;
7 routing the voice signal to a voice recognizer;
8 recognizing/interpreting/analyzing the voice signal and generating command
9 signals, the voice recognizer being capable of recognizing/interpreting/analyzing voice
10 signals transmitted from a plurality of users;
11 accessing/browsing the requested Internet contents; and

12 presenting accessed/browsed Internet contents on the television via the
13 television channel.

1 17. A computer data signal embodied in a carrier wave readable by a computing
2 system and encoding a computer program of instructions for executing a computer
3 process for accessing/browsing the Internet on a television, the computer process
4 comprising:

5 receiving a voice signal from a user, the voice signal controlling a television
6 display which is capable of displaying requested Internet contents via a television
7 channel;

8 routing the voice signal to a voice recognizer;

9 recognizing/interpreting/analyzing the voice signal and generating command
10 signals, the voice recognizer being capable of recognizing/interpreting/analyzing voice
11 signals transmitted from a plurality of users;

12 accessing/browsing the requested Internet contents; and

13 presenting accessed/browsed Internet contents on the television via the
14 television channel.

Abstract

A telephone interface and voice recognition driven Internet browser system and method for accessing/browsing the Internet on a cable or satellite television includes a phone for receiving a voice signal from a user. The voice signal controls a telephone
5 interface which displays Internet contents on the television via a cable or satellite television channel. The system also includes a voice recognizer, preferably operated on a supercomputer, for recognizing/interpreting/analyzing the voice signal and generating command signals to access/browse the Internet. The voice recognizer is capable of recognizing/interpreting/analyzing voice signals transmitted from a plurality of users in
10 real time. The system further includes a stack of computers and an Internet browser. Each of the stack of computers is capable of accessing/browsing the Internet and retrieving/organizing requested Internet contents via the Internet browser. The requested Internet contents are sent to the user via a cable or satellite television channel.

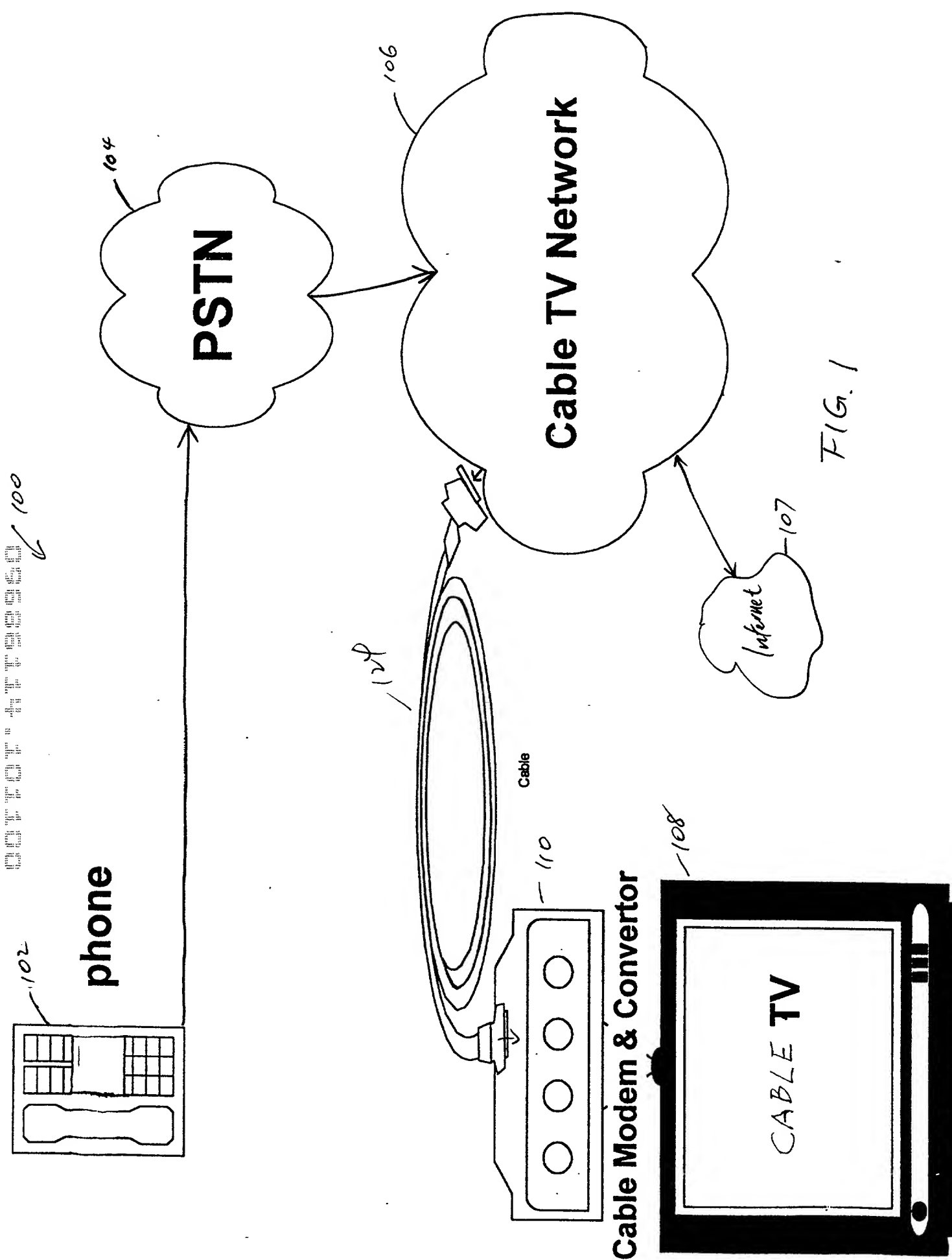


FIG. 1

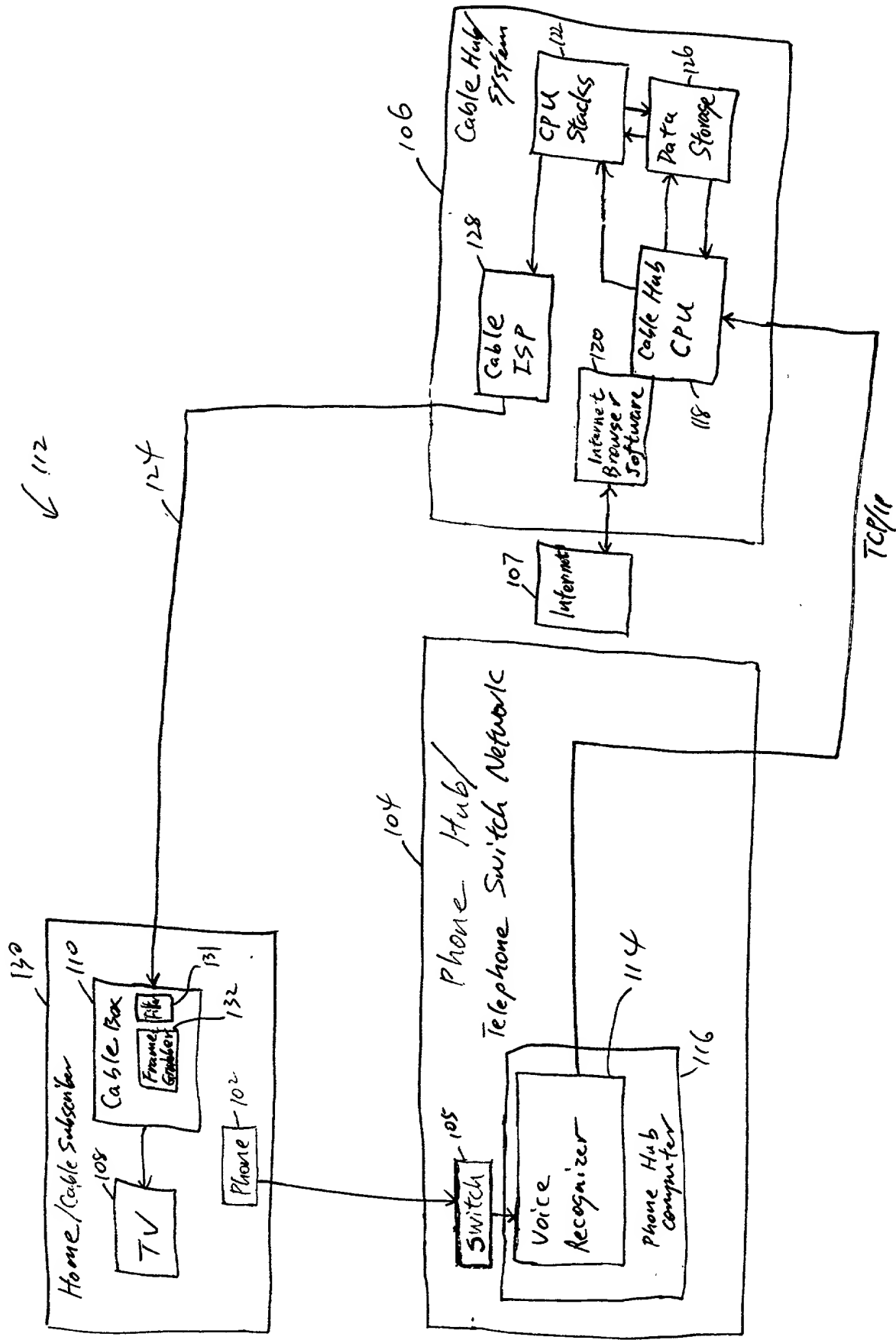
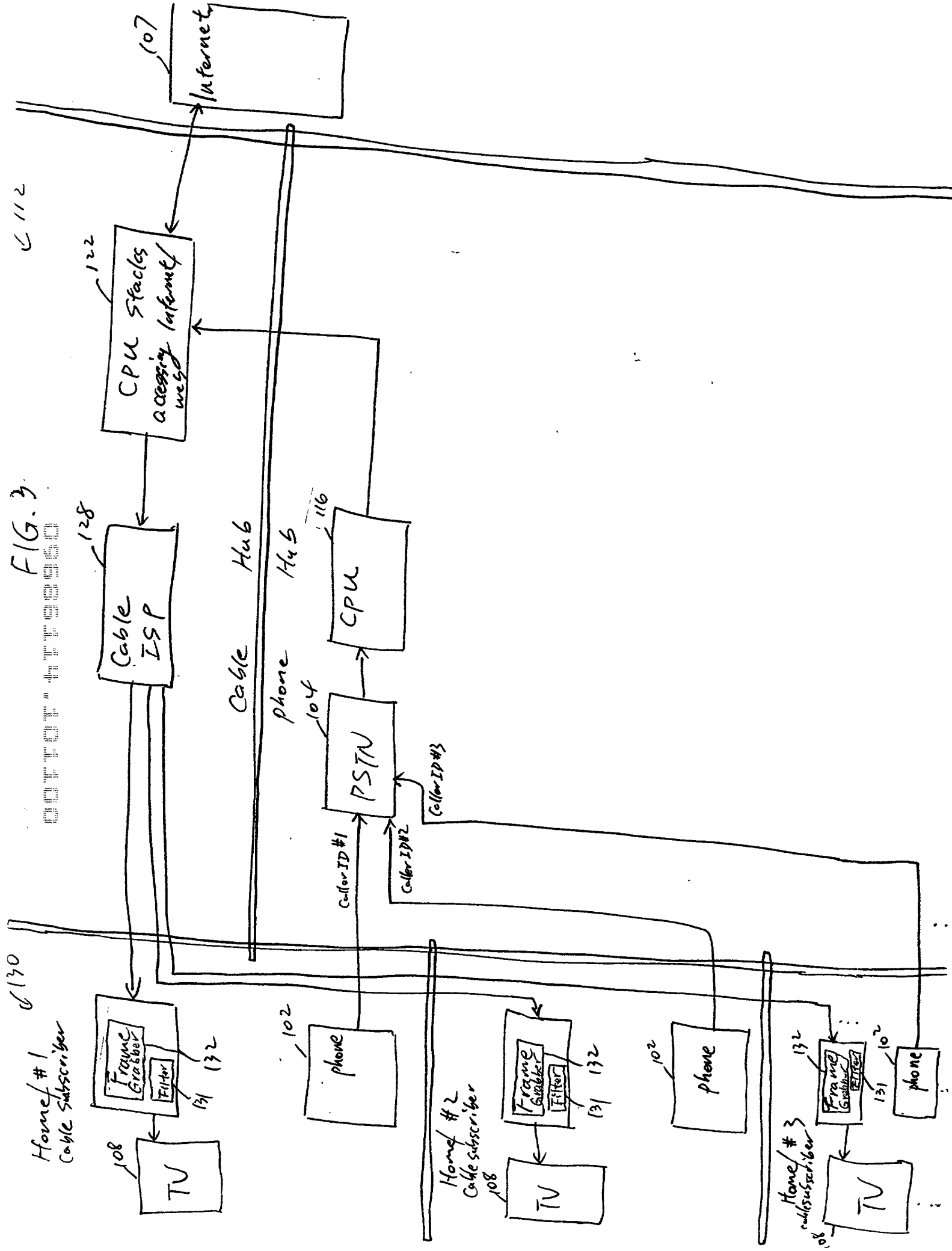


FIG. 3



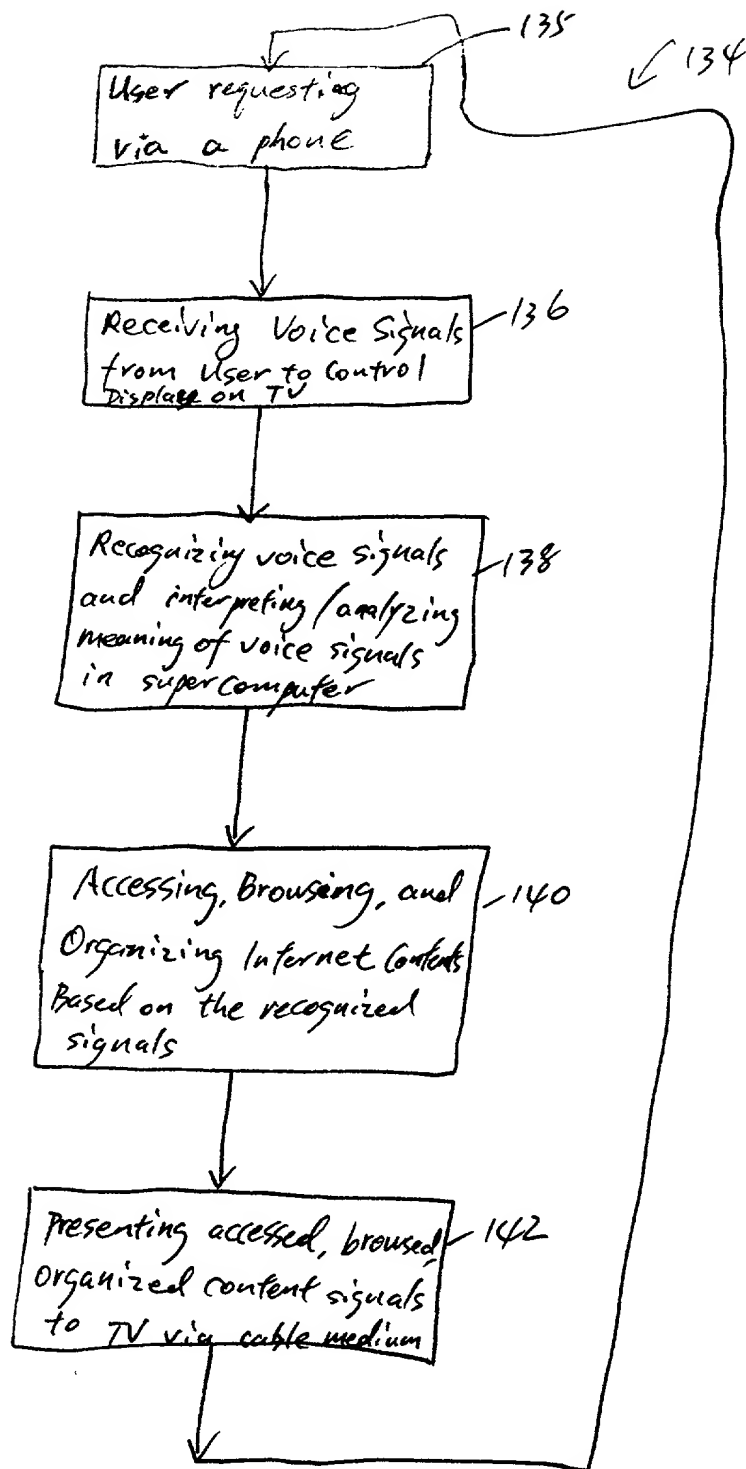


FIG. 4

MERCHANT & GOULD P.C.

United States Patent Application

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and sole inventor (if only one name is listed below) or a joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: METHOD AND APPARATUS FOR INTERNET TV

The specification of which

- a. ☒ is attached hereto
 b. ☐ was filed on _____ as application serial no. _____ and was amended on _____ (if applicable) (in the case of a PCT-filed application) described and claimed in international no. _____ filed _____ and as amended on _____ (if any), which I have reviewed and for which I solicit a United States patent.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56 (attached hereto).

I hereby claim foreign priority benefits under Title 35, United States Code, § 119/365 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

- a. ☒ no such applications have been filed.
 b. ☐ such applications have been filed as follows:

FOREIGN APPLICATION(S), IF ANY, CLAIMING PRIORITY UNDER 35 USC § 119			
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)
ALL FOREIGN APPLICATION(S), IF ANY, FILED BEFORE THE PRIORITY APPLICATION(S)			
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)

I hereby claim the benefit under Title 35, United States Code, § 120/365 of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. APPLICATION NUMBER	DATE OF FILING (day, month, year)	STATUS (patented, pending, abandoned)

I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below:

U.S. PROVISIONAL APPLICATION NUMBER	DATE OF FILING (Day, Month, Year)
60/167,505	24 November 1999

I hereby appoint the following attorney(s) or patent agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

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Daulton, Julie R.	Reg. No. 36,414	Schuman, Mark D.	Reg. No. 31,197
DeVries Smith, Katherine M.	Reg. No. 42,157	Schumann, Michael D.	Reg. No. 30,422
DiPietro, Mark J.	Reg. No. 28,707	Scull, Timothy B.	Reg. No. 42,137
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Kowalchyk, Alan W.	Reg. No. 31,535	Zeuli, Anthony R.	Reg. No. 45,255
Kowalchyk, Katherine M.	Reg. No. 36,848		

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/ organization who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Merchant & Gould P.C. to the contrary.

Please direct all correspondence in this case to Merchant & Gould P.C. at the address indicated below:

Merchant & Gould P.C.
P.O. Box 2903
Minneapolis, MN 55402-0903

I hereby declare that all statements made in of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

(1) prior art cited in search reports of a foreign patent office in a counterpart application, and

(2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

(1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a

claim
or
(2) It refutes, or is inconsistent with, a position the applicant takes in:

(i) Opposing an argument of unpatentability relied on by the Office, or

(ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

(1) Each inventor named in the application:

(2) Each attorney or agent who prepares or prosecutes the application; and

(3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.